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ABSTRACT

This paper makes recommendations for developing the next generation of state accountability systems for postsecondary vocational education (PVE). It focuses on the need to improve the core indicators for PVE; reduce the burden and improve the value of Carl D. Perkins Vocational and Applied Technology Education Amendments of 1998 (Perkins III) accountability requirements; and integrate future federal VE measures into a comprehensive institution-centered framework that integrates PVE and workforce development performance indicators. First, the paper summarizes major trends in the postsecondary accountability environment at national and state levels and presents how community and technical colleges are responding by creating performance indicator frameworks. Second, it reviews the major accomplishments and remaining problems and issues in the Perkins III effort and makes recommendations on how to build from these efforts. Third, the paper makes recommendations on developing and supporting core indicators for PVE and how they can be incorporated into broader institution-centered accountability systems for managing performance improvement. Finally, the paper makes recommendations for the federal role in accountability and how the Office of Vocational and Adult Education can play a catalyst role in improving state and institutional accountability systems for postsecondary education, including VE. (Contains 21 references.) (YLB)

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# Improving State Accountability Systems for Postsecondary Vocational Education

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# Improving State Accountability Systems for Postsecondary Vocational Education

Robert G. Sheets

## *Introduction*

Since the 1980s, state community and technical college boards and agencies and institutions have experienced a major increase in federal and state accountability requirements. This increase has been accompanied by a shift in emphasis from access to performance. This new environment is prompting state boards and agencies and institutions to develop new performance indicator systems for reporting and managing continuous improvement for all major functions and programs, including vocational education.

The Carl D. Perkins Vocational and Applied Technology Education Amendments of 1998 (Perkins III) have been a major driving force in creating this new accountability environment and in shaping state and institutional responses to it. The development of the Perkins III accountability system for postsecondary vocational education marked the first major federal-state effort to develop and fully implement a national framework for state accountability systems for vocational education in the United States. This effort broke new ground and improved the measurement and reporting of secondary and postsecondary student outcomes in vocational education.

However, this effort also highlighted some major issues that should frame future discussions and efforts to improve postsecondary accountability systems. One major issue is whether the Perkins III core indicators are comprehensive and valid indicators for measuring the performance of postsecondary vocational education and whether states have the capacity to collect and report high quality data for these measures. A second issue is whether the Perkins III accountability requirements are creating unnecessary burden on states and institutions and how to improve their value and lower their costs. A third major issue is whether there should be more consistency between these measures and other federal, state, and institutional performance measures (OVAE, 2000b). Should the Perkins III core indicators be designed to fit within a larger postsecondary education framework that integrates vocational education measures with other postsecondary education and workforce development measures?

The purpose of this paper is to make recommendations for developing the next generation of state accountability systems for postsecondary vocational education. This paper focuses on the need to: (1) make improvements in the core indicators for postsecondary vocational education, (2) reduce the burden and improve the value of Perkins accountability requirements, and (3) integrate future federal vocational

education measures into a comprehensive institution-centered framework that integrates postsecondary education and workforce development performance indicators. This paper also makes recommendations for the federal role in accountability and how the Office of Vocational and Adult Education (OVAE) can play a catalyst role in improving state and institutional accountability systems for postsecondary education, including vocational education.

This paper first summarizes the major trends in the postsecondary accountability environment at the national and state levels and how community and technical colleges are responding by creating performance indicator frameworks. The paper then reviews the major accomplishments and remaining problems and issues in the Perkins III effort and makes recommendations on how to build from these efforts. Finally, the paper makes recommendations on developing and supporting core indicators for postsecondary vocational education and how they can be incorporated into broader institution-centered accountability systems for managing performance improvement.

## *The Changing Postsecondary Accountability Environment for Community and Technical Colleges*

What are the major changes in the postsecondary accountability environment that are shaping the development and implementation of new accountability systems at the national, state, and institutional levels? How are state community and technical college systems and institutions responding? What are the implications for future efforts in developing federal accountability systems for postsecondary vocational education?

## *Quality Assurance: From Self-Regulation to External Accountability Systems*

Throughout most of the 20th century, federal and state governments looked to higher educational institutions to define their own mission and goals and to define the criteria for quality in higher education services (Bogue and Saunders, 1992). Higher educational institutions were also given the authority to regulate themselves by developing and managing their own quality assurance systems through internal management systems and participating in national and regional accreditation systems. Leading higher educational institutions and federal and state governments promoted and supported the establishment of national and regional accreditation organizations to assure the quality of postsecondary education.

These self-regulation systems resulted in the development of internally focused quality assurance systems that were based on missions and goals defined by administrators and faculty members with only limited input from external stakeholders and customers. They also lead to the development of internally focused "quality indicators" that specified the organizational capabilities, conditions, practices, and resources necessary for providing high quality postsecondary educational services to students and fulfilling an institution's mission and goals. These quality indicators

provided the basis for government-endorsed, peer-controlled accreditation systems that used institutional self-study and analysis followed by peer review and validation coordinated through national and regional accreditation organizations.

Starting in the 1970s and 1980s, federal and state governments and other external stakeholders took a more active role in ensuring the quality of postsecondary education in the United States. The federal government added new reporting requirements and set performance requirements for student grant and loan programs. States expanded the roles of higher education boards and commissions in ensuring greater accountability. Both federal and state governments established new external accountability systems to ensure that higher education was addressing a broader set of public and consumer expectations for postsecondary education and were measuring and monitoring the fulfillment of these expectations. These new systems did not replace accreditation. Rather, they represented an additional layer of accountability.

As noted by Levine (1992), this shift was prompted not by a well-documented "failure of performance" which was the driver in the K-12 accountability movement. Rather, it was a more generalized "crisis of confidence" and a growing recognition that federal and state governments were not taking an active role in defining the public interest in higher education and managing their sizeable investments. This shift was prompted by growing distrust of higher education and the perceived need to get a handle on the costs, productivity and effectiveness of higher education during a period of economic downturn and shrinking federal and state resources. There was a widespread and growing perception that traditional mechanisms for self-regulation and quality assurance were in disarray and could not be trusted.

These federal and state initiatives to establish external accountability systems prompted a major shift in national and regional accreditation organizations to focus more attention on external stakeholder and customer requirements. They also prompted a shift from internal "closed system" to external "open-system" models for quality assurance within higher educational institutions, including community and technical colleges (Alfred, 1997).

## *Performance Indicators: Expanding the Focus to Student Outcomes*

During the 1970s and 1980s, national and state accountability initiatives focused on developing comprehensive performance indicator systems to monitor the effectiveness of higher education (Borden and Bottrell, 1994). The early performance indicator systems focused on access, productivity, and quality with only limited attention to student outcomes. These initiatives focused on increasing access to higher education, especially minorities and underserved populations and in controlling costs and increasing productivity. Service output and cost measurement focused attention on how dollars were spent and justified the need for additional spending based on the quantity of services (e.g., units of instruction) provided and the additional costs of these services. During this same period, many states established institutional and program

effectiveness reviews that used "program quality" indicators along with market demand, student enrollment, and cost information to improve the quality and mix of postsecondary programs. These program quality indicators were similar to the quality criteria established by national and regional accreditation organizations.

During the 1990s, national and state initiatives expanded the focus to measuring the performance of postsecondary educational institutions based in part on student outcome indicators. Higher educational institutions were increasingly held accountable not only for providing access to high quality programs, but also for achieving results important to students and external stakeholders. Two major types of student outcomes were learning outcomes and economic outcomes.

**Learning Outcomes: Skill and Credential Attainment**. Most early federal and state initiatives focused major attention on the success of students in attaining postsecondary degrees. Some state performance indicator systems also reported course completion rates with the assumption that degree or course completion was a valid and reliable indicator of success in achieving learning outcomes. Starting in the 1980s, this assumption was called into question. The growing distrust of higher education was heightened by national studies and reports on lowered standards and grade inflation and the skill deficiencies of college graduates. Public and private leaders called for major reforms in postsecondary assessment and credentialing (National Governor's Association, 2000). This resulted in major national and state initiatives to improve postsecondary assessment and credentialing systems so that they can provide valid and reliable documentation of student learning outcomes. This also has prompted national and regional accreditation organizations to focus on improving student assessment systems and promoting new "outcome-based accreditation" models for four-year and two-year higher educational institutions. This remains a major challenge for postsecondary education as exemplified by the recent National Report Card on Higher Education that gave all states a grade of "incomplete" on their performance in student learning (National Center for Public Policy and Higher Education, 2000). This is also exemplified by national initiatives by higher education and business organizations to improve the quality of credentials including postsecondary education degrees and certificates (National Alliance of Business, 2001).

**Economic Outcomes: Employment and Earnings**. During the 1980s and 1990s, the focus of higher education accountability efforts expanded beyond learning outcomes to include economic returns to students attaining postsecondary degrees and credentials. The beginnings of this shift can be traced to the early 1980s when postsecondary educational institutions justified the need for higher levels of federal and state investment because of their contributions to state and local economic development and the increased earnings of American workers (Ewell, 1994). This also can be traced to efforts by postsecondary education representatives to justify increased tuition costs by arguing that postsecondary education remained a "high-value" investment for students because of the increasing economic returns to postsecondary education in the form of higher wages and earnings. With increased federal and state funding and greater flexibility in increasing tuition costs, higher education promised to

promote state and local economic development and raise the earnings of college graduates. In the 1990s, public and private leaders, including governors and state legislators, began asking for evidence that postsecondary education was delivering on these promises. In response, state higher educational agencies and boards launched initiatives to address the economic returns to postsecondary education. These initiatives included the development of new performance indicators and systems to collect information on the employment and earnings of students receiving postsecondary degrees and credentials (Mundhenk, 2000; Seppanen, 1995). These efforts were focused on the professional degree programs of four-year colleges and the career and technical programs at two-year community and technical colleges.

## *Increased Requirements for Consumer Information and Feedback*

During the 1980s and 1990s, most industries faced a consumer revolution. Consumers wanted more power in their purchasing decisions by having more information about products and services and the choices they were given in the marketplace. Consumer organizations and businesses responded by gathering and reporting comparative information on products and services and developed new materials and services to advise consumers.

As the costs of higher education continued to rise throughout the 1980s and 1990s and the value of higher education degrees increased in the labor market, this consumer revolution spilled over into the higher education marketplace. Parents, students, and public officials began demanding to know more about what they were getting for their money and they wanted the information to make comparisons between institutions and programs to improve their decisions. In response, federal and state governments focused on improving consumer information to help students chose colleges and universities with proven track records.

**Consumer Information Systems**. Federal and state governments launched major consumer information initiatives to respond to this growing demand for consumer information in higher education. Federal higher education legislation established "student-right-to-know" requirements for higher educational institutions. Federal agencies and departments converted national reporting systems, such as IPEDS, into consumer information systems that provided comparative information on colleges and universities. In addition, the Workforce Investment Act (WIA) established strong consumer information requirements for training providers, which included many community and technical colleges. These government initiatives developed reporting and consumer information systems to provide accurate and reliable data in a wide variety of areas including program completion and employment and earnings.

In addition, private organizations including leading magazines, such as U.S. News and World Report, began compiling and distributing comparative information on the "quality" and "value" of higher educational institutions and specific degree programs.

These private efforts have lead to the development of new measures for the quality and performance of higher education institutions.

**Customer Feedback: Measuring and Reporting Customer Satisfaction**. This consumer revolution in conjunction with a related quality movement in higher education has lead to more emphasis on measuring and reporting customer satisfaction. The higher education community is debating how to measure and use student feedback (Kulik, 2001) and overall customer satisfaction in performance reporting and internal improvement efforts similar to leading public and private sector models such as Kaplan and Norton's Balanced Scorecard and the Baldrige framework. This is also being debated in the implementation of WIA requirements for measuring customer satisfaction.

## *From Performance Reporting to Performance Management: Financial Incentives and Continuous Improvement*

During the 1990s, federal and state agencies used their performance indicators systems to not only report performance data but to manage performance. This was done by providing financial incentives to promote improvements and developing performance management requirements that asked institutions to develop and manage improvement strategies and report progress on these efforts.

**Performance-Based Planning and Budgeting**. Federal and state governments are undertaking major initiatives to use financial incentives and the budgeting process to drive performance improvement on a core set of performance measures. The performance incentive requirements in the WIA and Perkins III are only two examples of the use of performance incentives in federal legislation and federal agencies. In addition, states have been major players in using performance-based budgeting and financial incentives (Liner et al., 2001). In particular, states have taken major steps to use financial incentives and new approaches to planning and budgeting to promote performance improvement at the system and institutional levels in higher education including community and technical colleges (Ashworth, 1994).

**Performance Planning and Management**. The Government Performance and Results Act (GPRA) required federal agencies to develop strategic plans that established performance goals and strategies and "results frameworks" to manage improvement of performance over multiple years. States also established similar strategic planning and performance management requirements for agencies. These new federal and state requirements have expanded the purpose of performance indicators systems from reporting to overall performance management.

## *The Response of Community and Technical College Systems: The Development of Performance Indicator Systems*

State higher education boards, including community and technical college boards, and colleges have responded to the new accountability environment by developing performance indicators systems. These indicator systems are designed to report performance to federal agencies and state legislatures and manage improvement efforts at the state and institutional levels.

State higher education boards have developed comprehensive performance indicator systems for annual performance reports for state higher education systems. Some indicators apply to both four-year and two-year institutions (e.g., degree completion rates). Others are specifically designed to address the unique missions and roles of community and technical colleges. Community and technical college systems also have responded to the new accountability environment by developing comprehensive core indicator frameworks to measure and report "organizational effectiveness." In 1994, the American Association of Community Colleges held a national roundtable to share information on leading practices in developing and using "core indicators of effectiveness." This effort led to the development of national benchmarks for core indicators (Alred et al., 1999).

The major performance areas and selected example measures from state and institutional core indicator frameworks are summarized in Figure 1. These performance indicator systems reflect the multiple and distinct missions of community and technical colleges including their roles in: (1) academic preparation and transfer to four-year colleges; (2) the preparation for careers and employment; (3) adult, remedial and developmental education; (4) economic development and business and technology services; and (5) community development/service (Bailey and Averianova, 1998).

These core indicator frameworks also reflect the highly diverse student populations served by community and technical colleges and the wide range of goals these students have in attending two-year colleges. Community and technical colleges have a unique role in higher education not only because of their different roles and functions but the students they serve. They are widely recognized as providing open access to a wide variety of non-traditional students who historically have not participated in postsecondary education. These students have a wide variety of goals that are different than traditional students. Many of these non-traditional students only want to gain a specific skill, not complete a program. Many of these students are already employed and are interested in changing jobs or career advancement.

**Figure 1: Selected Indicators from State/Institutional Systems**

**Student Access and Persistence**

- Number and percent of minorities and other targeted populations enrolling in postsecondary education
- Student persistence (fall to fall enrollment)

**Skill and Credential Attainment**

- Skill attainment
- Course completion
- Degree/certificate attainment rate
- Licensure/certification pass rates

**Student Transition**

- Placement rate in employment
- Earnings at placement
- Transition to four-year colleges
- Retention at four-year colleges
- Grade point averages/course grades of transitioned students

**Customer Satisfaction**

- Student goal attainment (self-reported)
- Student satisfaction with services
- Employer satisfaction with services

Finally, these core indicator frameworks reflect the expanded definition of the customers and the growing recognition of employers and industry organizations as customers for economic and workforce development services. As community and technical colleges are expanding their role in economic and workforce development, they are increasingly addressing the needs of employers and major industries in their service regions.

## *Implications for Developing New Systems*

What are the implications of this changing postsecondary accountability environment and the responses of community and technical colleges for future efforts to develop federal performance accountability systems for postsecondary vocational education? The first implication is that future federal efforts should attempt to integrate multiple federal performance requirements and should be coordinated with state and local efforts to develop comprehensive frameworks for postsecondary institutions that balance the multiple missions and customer requirements of community and technical colleges. The second implication is that future efforts should attempt to improve the integration of federal and state performance measures with consumer information requirements. The third implication is that the focus should shift from federal reporting to performance management with an emphasis on using performance information and financial information to manage improvement and improve the return on public investment at the federal, state, and local levels.

## *Building from the Perkins III Core Indicator Framework: Problems and Issues*

The development of the Perkins III accountability system for postsecondary vocational education marked the first major federal-state effort to develop and fully implement a national framework for state accountability systems for vocational education in the United States. Perkins III made a major shift from Perkins II in the definition of the required indicators of performance moving from a gains to an attainment focus. OVAE worked with states for over a year to develop a core indicator framework that would provide the basis for addressing each of the required core indicators of performance while at the same time providing states with the flexibility to define their own measurement approaches and build from current state data collection and measurement systems.

This section first describes the Perkins III core indicator framework and then addresses three major issues:

- What should we be measuring and how do we improve state and institutional capacity for collecting high quality data?
- How do we reduce the burden and improve the value of the Perkins III accountability system for states and institutions?
- How do we improve the consistency and integration of federal and state core performance indicators for postsecondary education and workforce development?

## *Perkins III Core Indicator Framework*

Perkins III defines four major core indicators of performance, which provided the basis for developing the core indicator framework.

(1) Student attainment of challenging State established academic and vocational and technical skill proficiencies.

(2) Student attainment of a secondary school diploma or its recognized equivalent, a proficiency credential in conjunction with a secondary school diploma, or a postsecondary degree or credential.

(3) Placement in, retention in, and completion of postsecondary education or advanced training, placement in military service, or placement or retention in employment.

(4) Student participation in and completion of vocational and technical education programs that lead to non-traditional training and employment.

The Perkins III core indicator framework contains these core indicators for both secondary and postsecondary education. As shown in Figure 2, this framework established four core indicators and seven core subindicators for postsecondary vocational education. These subindicators are identified by a "P" next to each core subindicator.

The core indicator framework defines the performance measures and measurement approaches for the fourteen subindicators. It also defines the quality criteria for these measurement approaches. As defined in the core indicator framework document (OVAE, 2000a), these are:

- Performance Measures. The definition of the performance measures for each subindicator including the definition of the numerator and denominator of each performance measure.

- Performance Measurement Approaches. The major state approaches for performance measurement for each performance measure. These approaches include assessment and data collection strategies.

- Quality Criteria for Performance Measurement. The quality criteria for performance measurement to ensure sufficient rigor and comparability of state performance measurement and reporting.

**Figure 2: Perkins III Core Indicators and Subindicators**

**Core Indicator 1. Student Attainment**
- 1S1: Secondary Academic Attainment
- 1S2: Secondary Vocational and Technical Skill Attainment
- 1P1: Postsecondary Academic Attainment
- 1P2: Postsecondary Vocational and Technical Skill Attainment

**Core Indicator 2. Credential Attainment**
- 2S1: Secondary Completion
- 2S2: Proficiency Credential with Secondary Diploma
- 2P1: Postsecondary Degree or Credential

**Core Indicator 3. Placement and Retention***
- 3S1: Secondary Placement
- 3P1: Postsecondary Placement
- 3P2: Postsecondary Retention

**Core Indicator 4. Participation in and Completion of Non-Traditional Programs**
- 4S1: Participation in Secondary Non-Traditional Programs
- 4S2: Completion of Secondary Non-Traditional Programs
- 4P1: Participation in Postsecondary Non-Traditional Programs
- 4P2: Completion of Postsecondary Non-Traditional Programs

* Placement and retention address employment, further education and/or military.
Source: OVAE Core Indicator Framework (2000)

In the OVAE core indicator framework, states are held accountable for only those students with concentrated participation in vocational education—that is, those students who reach a state-defined threshold level of vocational education. Although states are required to report enrollment information for all vocational students, they are required to report performance information for only vocational concentrators (See Figure 3). Only two subindicators address a wider student population. These are the two subindicators for participation in non-traditional programs—4S1—Participation in Secondary Non-Traditional Programs and 4P1—Participation in Postsecondary Non-Traditional Programs. These two subindicators address vocational participants—that is, students who enrolled in at least one vocational-technical education course. The placement and retention subindicators further restrict state accountability to only those vocational concentrators who successfully complete their programs by receiving a credential. As shown in Figure 3, vocational completers are those vocational concentrators who have attained the academic and technical knowledge/skills/proficiencies in their programs/sequences of courses as evidenced by a diploma or degree or certificate.

In using the core indicator framework, states have considerable latitude in defining their measures and measurement approaches. They also have considerable flexibility in how they define vocational concentrators and completers for reporting their results.

**Figure 3: Student Population Definitions**

**Threshold Level of Vocational Education**
A threshold level of vocational education is defined as a program/sequence of courses or instructional units that provides an individual with the academic and technical knowledge/skills/proficiencies to prepare the individual for employment and/or further/advanced education (Section 3 (29) Definitions).

**Vocational Participant**
Student who enrolled in at least one vocational-technical education course.

**Vocational Concentrator**
Student who enrolled in a threshold level of vocational education.

**Vocational Completer**
Student who attained the academic and technical knowledge/skills/proficiencies within a program/sequence of courses or instructional units that provides an individual with the academic and technical knowledge/skills/proficiencies to prepare the individual for employment and/or further/advanced education.

Source: OVAE Core Indicator Framework (2000)

## *Core Postsecondary Indicators: What Should We Be Measuring and How Can We Improve Data Quality?*

Although the development of the Perkins III core indicator framework was successful in supporting state efforts to report performance on all core indicators, this effort also raised some major problems and issues for postsecondary accountability systems. This framework attempted to develop parallel secondary and postsecondary subindicators emphasizing consistency of measurement for schools and colleges. As found in OVAE's state pilot project (OVAE, 2000), this effort resulted in major challenges for states in applying some measures to postsecondary institutions such as academic attainment. As seen in the discussion of current trends in states in developing "core indicators of effectiveness," this also has resulted in some major gaps in measuring critical outcomes addressed in state and institutional systems, such as earnings of completers and student satisfaction and accomplishment of student goals.

The question of what we should be measuring can best be addressed by reviewing the development of each Perkins III core indicator and comparing the Perkins III subindicators to the state and institutional "core indicators of effectiveness" summarized in Figure 1.

**Core Indicator 1: Student Attainment**. The effort to create parallel measures for secondary and postsecondary education on academic attainment poses some major problems and issues. The core indicator framework was designed to build on and reinforce state academic standards and assessment systems designed for all secondary students including vocational education students. This was done to reinforce the commitment that vocational students should be expected to meet the same state academic requirements as all students and perform at or above the level of all students on state academic assessments. This effort was very timely and successful in improving secondary accountability but presents problems at the postsecondary level. One reason is that there is no equivalent for state academic standards at the postsecondary level and not all programs define separate academic requirements. Another reason is that students have varying needs and interests and may not take courses or programs with well-define academic requirements other than basic skill requirements.

Another problem is the lack of strong measurement approaches for vocational and technical skill attainment. Most states utilized existing institutional grading and credentialing systems to measure skill attainment with the argument that they are valid and reliable indicators of skill attainment. Many states used the same measurement approach—program/degree completion—for both skill attainment and Core Indicator 2—Credential Attainment—with the argument that these two indicators were measuring the same student outcome (OVAE, 2000b). These arguments are reasonable but may not stand the test of time in light of the growing distrust of postsecondary assessment and credentialing practices and growing calls for reform in assessment and credentialing at all levels. Also, most students do not enroll in degree and certificate programs but take courses to upgrade skills and transfer to other institutions. The

separate skill attainment measure has the potential to capture outcomes for these students.

Recommendations. Future efforts should reconsider the use of a separate academic attainment measure. These efforts should focus on improving the measurement of vocational and technical skill attainment by improving the specification of learning outcomes and the assessment and credendialing of these skills by community and technical colleges.

**Core Indicator 2: Credential Attainment**. This is probably the most widely accepted and least controversial core indicator for postsecondary education. This is because it reinforces and supports the widespread collection of this information to meet a variety of federal and state accountability requirements. However, state measurement approaches raise some major problems and issues.

The first issue is what degree and certificate programs should be included. As reported in the OVAE state pilot project (OVAE, 2000b), some states include all AA/AS degree programs and all certificate programs. Others only include AS degree programs. This restricted interpretation fails to account for the fastest growing credentialing market for two-year colleges—short-term certificates.

The second issue is what students should be included. Some states include all students that completed a threshold level of courses within a program and/or registered the intent to complete the program. Other states use approaches from other federal reporting requirements that only include a small subset of students who were first-time, full-time students. This substantially reduces the number of students reported and fails to capture the growing non-traditional student population at two-year colleges—adults who attend part-time and work on their programs in irregular patterns. As recommended by Alred et al. (1999), the measurement of credential attainment should represent a broader student population and then be reported by different student populations as necessary.

Recommendations. Future efforts should focus on gaining broad state consensus on including the full range of degree and certificate programs and including all students who reach a threshold level regardless of whether they are first-time or returning students or whether they are full-time or part-time. As discussed above, future efforts also should focus on improving the specification and assessment of learning outcomes that are the basis for awarding degrees and certificates.

**Core Indicator 3: Placement and Retention**. The Perkins III framework restricts the focus of placement and retention to measuring only the transition of students to further education, employment, and/or the military. The only exception is employment, which includes a measure of employment retention. The subindicators do not address whether students are successful at four-year institutions. And, they did not address the quality of employment as measured by wages and earnings.

As discussed earlier, many state and institutional core indicator systems not only address transition to four-year colleges but also measure the success of students after transition. They use a variety of measures including persistence, grade point averages compared to now transfer students, and the percent of credits successfully transferred. Many states also address the quality of employment including training-related employment and earnings of graduates. The measurement of employment retention and earnings is a critical linkage to workforce development including connections to the WIA performance measures.

Another major issue is the different capacities of states to actually collect valid and reliable data on student transitions. Some states have developed the capacity to measure student transitions from community and technical colleges to four-year colleges and employment within and outside the state. However, these state capabilities vary tremendously by state. The result is wide variations in state performance due mainly to wide variations in data quality, not program quality. States need further support at the federal level to improve these systems (National Postsecondary Education Cooperative, 2001).

Recommendations. Future efforts should expand the measurement of transition to include student retention and success at four-year colleges. Future efforts also should develop consistent measures with workforce development to address employment retention and earnings. Finally, future efforts should focus on improving state student transition data systems to improve the data quality for measuring transition to further education and employment.

**Core Indicator 4: Non-Traditional Participation and Completion.** This core indicator is the only indicator focused on specific programs and a specific student population in vocational education—non-traditional students. This population is also a special population with states required to report performance on this population for all other core indicators.

This core indicator raises some major questions and issues. The first issue is the wide variation in how states define non-traditional programs using their own systems for defining "programs." (OVAE, 2000b) The second issue is whether postsecondary education should focus on participation in one course for 4P1 or focus more on actual enrollment in a non-traditional program, which requires more concentration, usually 9-12 credit hours.

However, the biggest question is the need for this core indicator and whether it should play such a large role in the performance accountability system. Very few critics would argue that the Perkins III system should not focus on improving the access of males and females to non-traditional programs that result in improved success in the labor market. The question is: what is the overall outcome we want and what should we measure? Should the focus be on one strategy to improve equity in opportunity and earnings or should the focus be on measuring whether males and females are getting similar results? If so, then states and institutions should be held accountable for equity

in results and should use non-traditional careers as one strategy in closing the employment and earning gaps of males and females.

Recommendations. Future efforts should focus on reporting the performance of demographic groups and special populations on getting equitable results in skill attainment, credential attainment, and further education and employment transitions. One major special population should be students (males and females) enrolling in non-traditional programs. Future efforts should then review the need to retain this core indicator as a separate stand-alone indicator for postsecondary education.

**Additional Core Indicators: Student Goal Attainment and Customer Satisfaction.** In comparing the Perkins III core indicator framework with state and institutional efforts to develop their own core indicator frameworks, there is one major difference—the measurement of individual student goal attainment and student and employer satisfaction. Given the diverse needs and requirements of students attending community and technical colleges and the growth of enrollment in short-term, individualized education and training, this requires further exploration. In addition, the new emphasis on customer satisfaction in higher education and government also suggests the need for exploring the use of customer satisfaction to measure both student goal attainment and overall satisfaction with services.

Recommendations. Future efforts also should explore the use of customer satisfaction indicators to address the attainment of student goals and the satisfaction of students and employers with postsecondary vocational education services.

## *How Do We Reduce Burden and Improve Value?*

The second question is how to reduce the burden and improve the value of the Perkins III accountability system for states and institutions?

As described earlier, state community and technical college boards and colleges themselves are facing a new accountability environment at the national, state and local levels. Performance reporting is now considered a normal cost of doing business. The question of burden is not one of simply being required to be accountable for results and be expected to report high quality performance data to external stakeholders and funders. The question of burden is raised in the current environment only when reporting requirements from different funders and stakeholders:

(1) Are not valid indicators and steer states and institutions away from performance measures that matter,

(2) Require too much additional requirements for reporting detailed performance information by multiple student populations,

(3) Are inconsistent with the reporting requirements from other funders and stakeholders requiring multiple data collection and reporting systems,

(4) Do not provide sufficient funding or support to justify and offset the additional costs of doing business, and

(5) Do not add value in improving the effectiveness of the organization in meeting stakeholder and customer requirements.

**Perkins III Core Indicators: Valid Indicators for Community and Technical Colleges?** The question is not whether there are too many or too few Perkins measures. The question is whether they are the right measures and address the most critical goals of community and technical colleges in vocational education. Do the required measures provide a complete (scope) and accurate picture of the performance of colleges in vocational education? Are they the measures that really matter?

As discussed earlier, most of the Perkins III core indicators match core indicators that states and institutions currently define and measure in their own performance indicator systems because they are the same indicators identified by institutions themselves and requested by other federal and state funders and stakeholders. As a result, they do not create unnecessary burden on states and institutions. However, as recommended above, other Perkins III measures should be reconsidered and, in some cases, eliminated. This will not necessarily reduce the number of core indicators because, as recommended above, future efforts should also consider additional measures including transition success, earnings, and student goal attainment and customer satisfaction.

**Additional Reporting Requirements: Need for Demographic Group and Special Populations Performance Data**. Perkins III places requirements on states to report performance by demographic group and special population. As discussed earlier, many federal and state accountability systems require similar reporting and there is major interest in postsecondary education on equity in results such as the participation and success of minorities in postsecondary education. Future efforts should focus on developing standard definitions and measures of student characteristics to reduce burden.

**Consistency with Other Federal and State Reporting Requirements: Need for Aligned Postsecondary Education and Workforce Development Measures.** As stated above, the real burden in the new accountability environment is not simply in the reporting of outcomes, but in the need to establish separate reporting systems for multiple federal agencies and state boards. As discussed above, one major focus in future efforts should be to increase the consistency of performance indicators and data collection requirements across federal agencies and states.

**Reporting Requirements Backed by Funding/Technical Support: The Need for Building Capacity in Assessment and Student Transition Data Systems**. Another major focus in future efforts should be providing states and institutions with the resources and technical support to gather and report high-quality data on the most critical core indicators. As discussed earlier, the most critical data quality problems are in skill attainment and transition measurement. Future efforts should focus on improving assessment and credentialing systems at postsecondary education institutions and improving state student transition data systems.

**Adding Value: Moving from Performance Reporting to Performance Management for Continuous Improvement**. Future efforts should not only reduce costs but also improve value by improving state and institutional capacity to use data to improve performance. These efforts should focus on promoting best practices and models for managing improvement. They also should establish a national benchmarking system that provides states and institutions with comparative performance information.

## *How Do We Improve the Consistency and Integration of Performance Indicators?*

The third question is how to improve the consistency and integration of performance indicators?

In the new accountability environment, states and institutions are facing performance requirements from all sides. Performance measurement and reporting is now considered a normal cost of doing business in the education arena. As argued above, the real burden is having to address inconsistent or contradictory performance goals and having to develop and maintain multiple reporting systems for multiple federal, state, and local stakeholders. Although this problem is a general problem faced by all postsecondary education, it has the most severe impacts on community and technical colleges. This is because of their multiple missions and diverse customer goals and the difficult challenges of integrating and managing their multiple functions with different external stakeholders and performance requirements. This also is because community and technical colleges span two worlds—postsecondary education and workforce development. They are the major providers of education and training services for state and local workforce development systems funded by the Workforce Investment Act (WIA) and must balance and integrate both postsecondary and workforce development performance measurement and reporting requirements.

**Problems and Issues in Previous National Efforts**. The call for consistent performance measures is nothing new. The need for common or consistent performance measures in postsecondary education and workforce development has been widely recognized for almost twenty years. Federal agencies and states have worked together over many years to align federal performance measures and reporting requirements (Baj, Sheets, and Trott, 1994).

The first problem faced by previous efforts was the lack of educational performance measures. These efforts were hampered by the lack of a well-defined set of performance measures for postsecondary education, including vocational education, which could be integrated with workforce development measures. This is no longer the case. The problem now is too many different sets of postsecondary educational measures coming from many different units and programs in the U.S. Department of Education and other federal agencies.

A second problem with previous efforts has been their federal-centered, systems-building approach. Previous efforts have focused on aligning existing federal measures with only limited attention to state and local performance requirements. This is because previous efforts were driven by the workforce development side. They were focused on developing comprehensive workforce development systems. Community and technical colleges are funded primarily at the state and local levels and are increasingly driven by state and local performance requirements that address all of their missions including academic transfer, adult education, and economic development. They also are expected to address the needs and requirements of their regional economies and communities. Future efforts to integrate measures should balance federal, state, and local performance requirements.

A third problem with previous efforts has been the lack of attention to how measures must be designed to promote improved performance across functional areas at the service provider level—in this case, at the institutional level. The assumption has been that if we develop consistent measures across funding streams for each separate measurement area—placement, skill attainment, program completion---then we have solved the problem. However, leading efforts in the private sector go a step farther (e.g., Kaplan and Norton, 1996, Eckes, 2001). They attempt to develop performance measurement systems that promote the integration and synergy of different functional areas and units by looking at the interrelationship between measures and whether they are having unintended negative consequences for the entire organization. They also develop strategic or balanced scorecard systems that can help the entire organization manage improvement strategies and manage whole end-to-end processes that provide value to customers. These systems help manage the performance of the entire enterprise from the perspective of the customer at the point of service delivery.

**Moving from Federal-centered to Institution-centered Frameworks**. Future efforts should build from previous federal-centered efforts, but they should create more balance between federal, state and local performance requirements. They also should develop new performance indicator frameworks from multiple perspectives, not simply the perspective of federal agencies managing their own performance accountability and reporting systems. They should balance this federal perspective with state and local perspectives. However, the major focus should be the perspective of service providers. Future efforts should develop common or consistent measures, in part, from a comprehensive postsecondary education framework based on the perspective of postsecondary educational institutions and how they are expected to use these measures to manage performance improvement. This framework should then be used

by federal and state governments to develop their performance measurement requirements. This will result in an institution-centered framework that will create more value and add less burden for community and technical colleges. It will also have the best chance of being fully implemented and achieving returns on federal and state investment.

## *Conclusions and Recommendations*

As discussed in this paper, there are growing national and state demands for accountability in postsecondary education. This new environment is prompting federal agencies, state boards and agencies, and institutions to develop new performance indicator systems for reporting and managing continuous improvement for all major functions and programs including vocational education. What role should the U.S. Department of Education play in the future and how should the department build from the accomplishments of the Perkins III effort?

## *Federal Role in Postsecondary Accountability*

The federal government is a major funder and stakeholder in postsecondary vocational education through Perkins funding and other federal funding sources (e.g., student grants and loans) that are increasingly used by students attending community and technical colleges. The federal government has a legitimate role to play in ensuring that states and institutions are meeting the needs of targeted customers and providing a return on federal investment.

However, the federal government has unnecessarily increased state and local accountability burdens by not developing consistent performance indicators across multiple federal programs and working with states and institutions to develop a common performance indicator framework that can be used to promote improvement in postsecondary education including vocational education. There is a need to integrate the Perkins III secondary core indicator framework within state secondary educational accountability systems. And, there is also a need to do the same thing at the postsecondary level by integrating future efforts into larger efforts to develop a core indicator framework for postsecondary education. This effort should place a strong emphasis on integrating postsecondary education and workforce development.

To address this problem, the federal government should play a catalyst role in working with states and institutions to develop a national (not federal) consensus on an institution-centered core indicator framework for two-year colleges that address the full range of goals and functions of these unique institutions and address the needs of all funders and stakeholder, not just the federal government. This framework should address both performance indicators and student populations. The federal government should then use this framework to develop federal performance indicators and measures and data reporting requirements consistent with this framework.

The federal government also should play a major role in expanding the capacity of states and educational institutions to collect and use data to report performance and manage continuous improvement. The federal government should focus on improving assessment and credentialing practices and improving the capacity of states and institutions to measure student transitions. Also, the federal government should work with states and institutions to improve data management and analysis capacity at the state and local levels.

The federal government also should play a catalyst role in shifting the focus from reporting performance to using performance information to manage continuous improvement. This should be done through two strategies. First, the federal government should work with states and institutions to develop data and technical standards for information systems and promote best practices in state and local information systems. This should provide the basis for improved federal reporting. Second, the federal government should promote the use of data for performance improvement by promoting best practices in performance management and continuous improvement and encouraging the development of a national benchmarking data system for states and institutions to use in obtaining comparative performance information.

## *Building from the Perkins III Effort*

As discussed earlier, the development of the Perkins III accountability system for postsecondary vocational education broke new ground and improved the measurement and reporting of core secondary and postsecondary student outcomes in vocational education programs. It also used core indicators that are widely used by states and institutions in developing core indicators of effectiveness.

Future efforts should build on the Perkins III accomplishments by integrating major elements of this framework into a larger institution-centered postsecondary framework. This effort should address some of the major problems including: (1) data quality problems in skill attainment measurement, (2) including all students and programs in credential attainment measurement, (3) expanding transition measurement to include success in four-year educational programs and earnings and improving state student transition data systems, and (4) recasting the non-traditional performance measure. These efforts also should explore adding additional measures to capture the achievement of student goals and customer satisfaction.

## *Major Recommendations*

1. OVAE and states should establish a national taskforce to develop a comprehensive institution-centered core indicator framework that two-year community and technical colleges can use to manage continuous improvement, provide consumer information, and report progress to external stakeholders through federal and state performance accountability systems. This framework minimally should establish a core set of performance indicators and student populations.

2. This national taskforce should focus attention on the development of core indicators in two major areas: (1) skill and credential attainment and (2) transition to further education and employment. It should explore the development of new transition measures that address the success and retention of students transferring to four-year colleges and universities. It also should explore new transition measures that address employment retention and earnings consistent with related measures in workforce development.

3. This national taskforce should sponsor a national roundtable discussion on best practices in the measurement and use of customer satisfaction data in the public and private sectors with a special focus on how corporations use customer satisfaction data in their performance management systems. The national taskforce should use this forum to consider additional core indicators for customer satisfaction that can address student goal attainment and overall student and employer satisfaction with services.

4. This taskforce should also focus on developing common definitions for all major student populations for reporting performance on the core performance indicators. The taskforce should focus on defining the major demographic groups and special populations.

5. OVAE and its federal agency partners and states and national associations should use this core indicator framework to promote consistency in performance measurement requirements in federal and state legislation and consistency between the performance indicators developed and used by federal and state agencies and programs.

6. OVAE and states should focus future data quality efforts on two major areas: (1) assessment and credentialing systems used by postsecondary institutions to award degrees and certificates and (2) transition measurement especially the capacity of states to use administrative record exchange systems to measure student transitions to four-year colleges and universities and UI-covered employment both within and between states.

7. OVAE and states should identify, develop, and promote models for institution-based performance management systems for managing continuous improvement.

8. OVAE and states along with representatives from community technical colleges should launch a national project to use this institution-based performance indicator framework and leading performance management models as the foundation for establishing a comprehensive set of national (not federal) voluntary data content and technical standards for state and institutional information systems for the collection and distribution of information.

9. OVAE and states should use these voluntary national data content and technical standards to develop federal and state reporting requirements and to develop a national benchmarking data system that states and institutions can use to benchmark their performance and manage their improvement efforts.

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